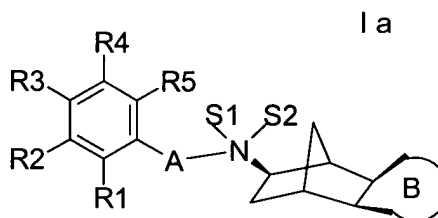
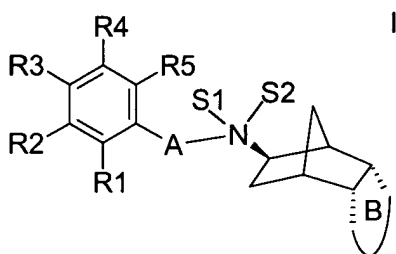


AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1. (previously amended) A substituted norbornylamino compound having exo-configured nitrogen and an endo-fused five-, six- or seven-membered ring of the formula I or a pharmaceutically acceptable salt or trifluoroacetate salt thereof, or having exo-configured nitrogen and an exo-fused five-, six- or seven-membered ring of the formula I a or a pharmaceutically acceptable salt or trifluoroacetate salt thereof



in which:

A is (C₁-C₄)-alkylene;

S1 is a free electron pair or (C₁-C₄)-alkyl;

S2 is (C₁-C₄)-alkyl or H;

where, if S1 and S2 are alkyl, a group -N⁺(S1S2)- X⁻ is obtained, wherein

X⁻ corresponds to a pharmacologically acceptable anion or

trifluoroacetate;

B is a saturated or unsaturated five-, six- or seven-membered carbon ring which may be mono- or, independently of one another, polysubstituted by oxo, hydroxyl, (C₁-C₄)-alkoxy and (C₁-C₄)-alkyl;

and

R1, R2, R3, R4 and R5

are, independently of one another, H, OH, F, Cl, Br, I, CN, NO₂, amidino, -CO₂R(11), -CONR(11)R(12), -SO_rR(11), -SO_sNR(11)-R(12), (C₁-C₄)-alkyl, (C₁-C₄)-alkoxy, (C₁-C₄)-alkoxy-(C₁-C₄)-alkyl, (C₁-C₄)-alkoxy-(C₁-C₄)-alkyloxy, hydroxy-(C₁-C₄)-alkyl, (C₃-C₇)-cycloalkoxy or phenyloxy,

where phenyl is unsubstituted or substituted by up to three substituents, which are independent of one another and are F, Cl, Br, or methoxy;

amino, (C₁-C₄)-alkylamino, di-(C₁-C₄)-alkylamino, amino-(C₁-C₄)-alkyl, di-(C₁-C₄)-alkylamino-(C₁-C₄)-alkyl, (C₁-C₄)-alkylamino-(C₁-C₄)-alkyl,

where some or all of the hydrogen atoms in the alkyl radicals may be substituted by fluorine;

R11 and R12

are, independently of one another, H or (C₁-C₄)-alkyl,

where some or all of the hydrogen atoms in the alkyl radicals may be substituted by fluorine;

r is 0, 1 or 2;

s is 1 or 2;

or

at least one of R1 and R2, R2 and R3, R3 and R4, and R4 and R5

together form one or more groups -O-(CH₂)_n-O-;

n is 1 or 2;

and

the radical or radicals R1, R2, R3, R4 and R5 which do not form said group or groups

-O-(CH₂)_n-O-

is or are, independently of one another, H, OH, F, Cl, Br, I, CN, NO₂, amidino,

-CO₂R(11), -CONR(11)R(12), -SO_rR(11), -SO_sNR(11)-R(12), (C₁-C₄)-alkyl,

(C₁-C₄)-alkoxy, (C₁-C₄)-alkoxy-(C₁-C₄)-alkyl, (C₃-C₇)-cycloalkoxy,

hydroxy-(C₁-C₄)-alkyl, amino, (C₁-C₄)-alkyl-amino, di-(C₁-C₄)-alkylamino,

amino-(C₁-C₄)-alkyl, di-(C₁-C₄)-alkylamino-(C₁-C₄)-alkyl,

(C₁-C₄)-alkylamino-(C₁-C₄)-alkyl,

where some or all of the hydrogen atoms in the alkyl radicals may be

substituted by fluorine;

R11 and R12

are, independently of one another, H or (C₁-C₄)-alkyl,

where some or all of the hydrogen atoms in the alkyl radicals may be substituted by fluorine;

r is 0, 1 or 2;

s is 1 or 2;

except for benzyl(octahydro-4,7-methanoinden-5-yl)amine.

Claim 2. (previously amended) A compound of Claim 1, having exo-configured nitrogen and an endo-fused five- or six-membered ring of the formula I, or having exo-configured nitrogen and an exo-fused five- or six-membered ring of the formula I a, in which:

A is (C₁-C₂)-alkylene;

S1 is a free electron pair or methyl;

S2 is H;

B is a saturated or unsaturated five- or six-membered carbon ring;

R1, R2, R3, R4 and R5

are, independently of one another, H, amino, hydroxymethyl, OH, methoxy, F, Cl, Br or iodine;

or

R2 and R3

together are -O-CH₂-O-;

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

and

the remaining radicals R1, R4 and R5

are, independently of one another, H, OH, F, Cl, Br, I, CN, NO₂, (C₁-C₂)-alkoxy, amino, (C₁-C₂)-alkylamino or di-(C₁-C₂)-alkylamino,

where some or all of the hydrogen atoms in the alkyl radicals may be substituted by fluorine;

or a pharmaceutically acceptable salt or trifluoroacetate salt thereof.

Claim 3. (original) A compound of Claim 1, having exo-configured nitrogen and an endo-fused five- or six-membered ring of the formula I, or having exo-configured nitrogen and an exo-fused five- or six-membered ring of the formula I a, in which:

A is (C₁-C₂)-alkylene;

S1 is a free electron pair;

S2 is H;

B is a saturated or unsaturated five- or six-membered carbon ring;

R1, R3 and R5

are hydrogen;

and R2 and R4

are, independently of one another, H, methoxy, F or Cl;

or

R2 and R3

together are -O-CH₂-O-;

and

R1, R4 and R5

are hydrogen;

or a pharmaceutically acceptable salt thereof.

Claim 4. (previously amended) A compound of Claim 1, having exo-configured nitrogen and an endo-fused five- or six-membered ring of the formula I, or having exo-configured nitrogen and an exo-fused five-membered ring of the formula I a, wherein the compound is:

exo/endo-(3-chlorobenzyl)(octahydro-4,7-methanoinden-5-yl)amine,

exo/endo-(3-fluorobenzyl)(octahydro-4,7-methanoinden-5-yl)amine,

exo/endo-benzo[1,3]dioxol-5-ylmethyl(octahydro-4,7-methanoinden-5-yl)amine,

exo/endo-(rac)-(3-methoxybenzyl)(octahydro-4,7-methanoinden-5-yl)amine,

exo/endo-(+)-(3-methoxybenzyl)(octahydro-4,7-methanoinden-5-yl)amine,

exo/endo-(-)-(3-methoxybenzyl)(octahydro-4,7-methanoinden-5-yl)amine,

exo/endo-[1-(3-methoxyphenyl)ethyl](octahydro-4,7-methanoinden-5-yl)amine,

exo/endo-(3-fluorobenzyl)(3a,4,5,6,7,7a-hexahydro-1H-4,7-methanoinden-5-yl)amine,

exo/endo-(3-fluorobenzyl)(3a,4,5,6,7,7a-hexahydro-3H-4,7-methanoinden-5-yl)amine,
 exo/endo-(3a,4,5,6,7,7a-hexahydro-1H-4,7-methanoinden-5-yl)(3-methoxybenzyl)amine,
 exo/endo-(3a,4,5,6,7,7a-hexahydro-3H-4,7-methanoinden-5-yl)(3-methoxybenzyl)amine,
 exo/endo-(decahydro-1,4-methanonaphthalen-2-yl)(3-methoxybenzyl)amine,
 exo/endo-(3,5-difluorobenzyl)(octahydro-4,7-methanoinden-5-yl)amine,
 exo/exo-(3-fluorobenzyl)(octahydro-4,7-methanoinden-5-yl)amine, or
 exo/exo-(3-methoxybenzyl)(octahydro-4,7-methanoinden-5-yl)amine, or
 a pharmaceutically acceptable salt or trifluoroacetate salt thereof.

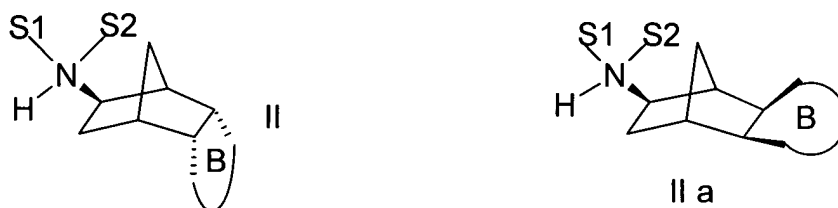
Claim 5. (previously amended) A compound of Claim 1, having exo-configured nitrogen and an endo-fused 5- or 6-membered ring, wherein the compound is:

exo/endo-(3-chlorobenzyl)(octahydro-4,7-methanoinden-5-yl)amine,
 exo/endo-(3-fluorobenzyl)(octahydro-4,7-methanoinden-5-yl)amine,
 exo/endo-(3-fluorobenzyl)(3a,4,5,6,7,7a-hexahydro-1H-4,7-methanoinden-5-yl)amine,
 exo/endo-(3-fluorobenzyl)(3a,4,5,6,7,7a-hexahydro-3H-4,7-methanoinden-5-yl)amine,
 exo/endo-benzo[1,3]dioxol-5-ylmethyl(octahydro-4,7-methanoinden-5-yl)amine,
 exo/endo-(rac)-(3-methoxybenzyl)(octahydro-4,7-methanoinden-5-yl)amine,
 exo/endo-(+)-(3-methoxybenzyl)(octahydro-4,7-methanoinden-5-yl)amine,
 exo/endo-(decahydro-1,4-methanonaphthalen-2-yl)(3-methoxybenzyl)amine,

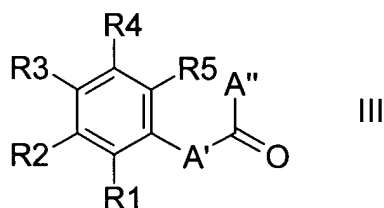
exo/endo-(-)-(3-methoxybenzyl)(octahydro-4,7-methanoinden-5-yl)amine, or
 exo/endo-(3,5-difluorobenzyl)(octahydro-4,7-methanoinden-5-yl)amine, or
 a pharmaceutically acceptable salt or trifluoroacetate salt thereof.

Claim 6. (previously amended) A process for preparing a compound of Claim 1,
 comprising

(A) reacting a compound of the formula II or II a



with a compound of the formula III



in which S1, S2, B, R1, R2, R3, R4 and R5 are as defined in Claim 1, while

independently of one another A' is a bond or (C₁-C₃)-alkylene and A'' is H or (C₁-

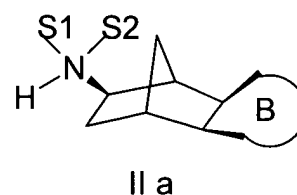
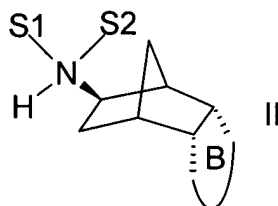
C₃)-alkyl and A' and A'' together with the carbon atom of the carbonyl group represent the same number of carbon atoms as A,

in the presence of suitable reducing agents and optionally also Lewis acids directly to give a compound of the formula I or I a, and

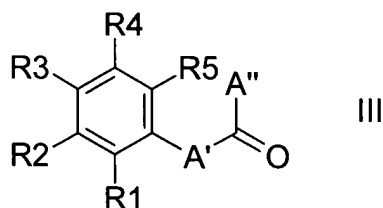
(B) optionally converting the compound of formula I or I a into a pharmaceutically acceptable salt or trifluoroacetate salt.

Claim 7. (previously amended) A process for preparing a compound of Claim 1, comprising

(A) reacting a compound of the formula II or II a

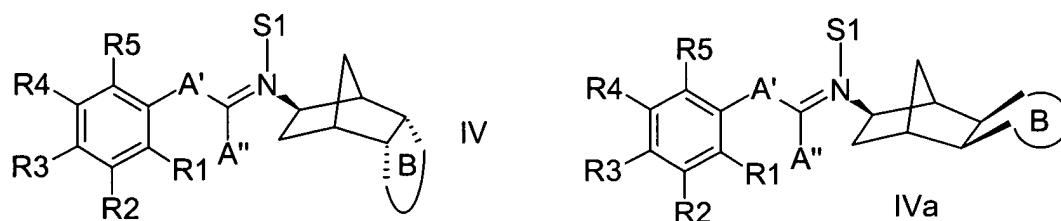


with a compound of the formula III



in which S1, S2, B, R1, R2, R3, R4 and R5 are as defined in Claim 1, while independently of one another A' is a bond or (C₁-C₃)-alkylene and A'' is H or (C₁-C₃)-alkyl and A' and A'' together with the carbon atom of the carbonyl group represent the same number of carbon atoms as A,

(B) isolating the intermediate of the formula IV or IV a



formed from the reaction of the compounds of the formulae II or II a and III, in which, if S1 is (C₁-C₄)-alkyl, an onium nitrogen is formed which is associated with a counterion,

(C) converting the intermediate with suitable reducing agents into a compound of the formula I or Ia, and

(D) optionally converting the compound of the formula I or I a into a pharmaceutically acceptable salt or trifluoroacetate salt.

Claim 8. (original) A process as claimed in Claim 7, wherein the counterion is chloride or tosylate.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

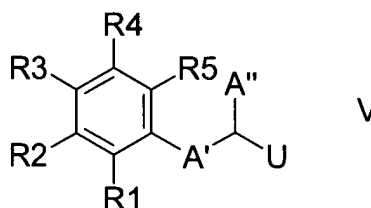
1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

Claim 9. (previously amended) A process for preparing a compound of Claim 1, comprising

(A) reacting a compound of the formula II or II a



with an alkylating agent of the formula V



in which U is a nucleophilically substitutable group, and in which S1, S2, B, R1, R2, R3, R4 and R5 are as defined in Claim 1, while independently of one another A' is a bond or (C₁-C₃)-alkylene and A'' is H or (C₁-C₃)-alkyl and A' and A'' together with the carbon atom to which U is attached represent the same number of carbon atoms as A, to give a compound of the formula I or I a, and

(B) optionally converting the compound of the formula I or I a into a pharmaceutically acceptable salt or trifluoroacetate salt.

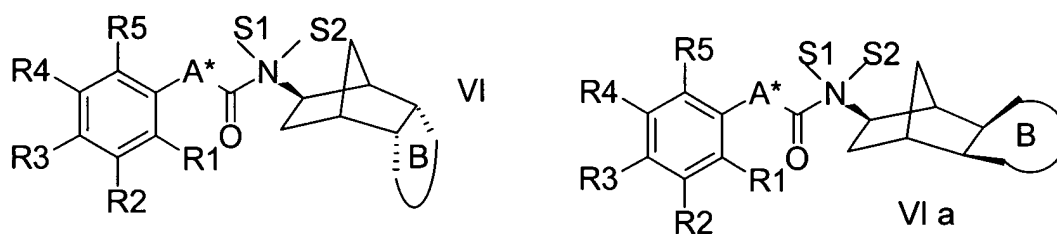
Claim 10. (original) A process as claimed in Claim 9, wherein U is chlorine, bromine, iodine, mesylate, tosylate, or triflate.

Claim 11. (original) A process as claimed in Claim 9, wherein the reaction step occurs in the presence of one or more non-nucleophilic bases.

Claim 12. (original) A process as claimed in Claim 9, wherein the reaction step occurs in the presence of diisopropylethylamine.

Claim 13. (previously amended) A process for preparing a compound of Claim 1, comprising

(A) reducing a carboxamide of the formula VI or VI a



in which A* is a bond or (C₁-C₃)-alkylene and the other radicals are as defined in

Claim 1 to give a corresponding amine of the formula I or I a, and

(B) optionally converting the amine into a pharmaceutically acceptable salt or trifluoroacetate salt.

Claim 14. (previously amended) A process for converting a secondary amine of the formula I or I a as claimed in claim 1, into a tertiary amine or quaternary ammonium salt, or a pharmaceutically acceptable salt or trifluoroacetate salt thereof, comprising

(A) mono- or dialkylating a compound of the formula I or Ia in which S1 is a free electron pair and S2 is hydrogen, with alkylating agents of the formula VII



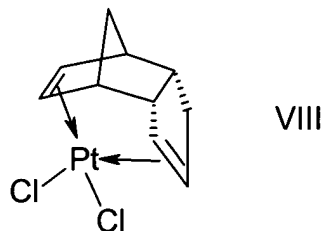
in which S* is (C₁-C₄)-alkyl and U is a nucleophilically substitutable group, thus obtaining a tertiary amine or a quaternary ammonium salt, and

(B) optionally converting the tertiary amine or quaternary ammonium salt into a pharmaceutically acceptable salt or trifluoroacetate salt.

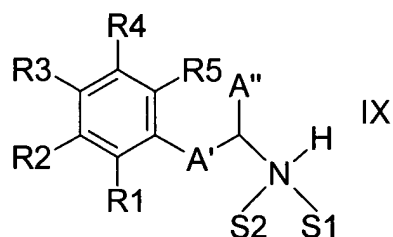
Claim 15. (original) A process as claimed in Claim 14, wherein U is chlorine, bromine, iodine, mesylate, tosylate, or triflate.

Claim 16. (previously amended) A process for preparing a compound of Claim 1, comprising

(A) reacting a dicyclopentadienylplatinum complex of the formula VIII



with amines of the type of the formula IX



in which S1, S2, R1, R2, R3, R4 and R5 are as defined in Claim 1, while independently of one another A' is a bond or (C₁-C₃)-alkyl and A'' is H or (C₁-C₃)-alkyl and A' and A'' together with the carbon atom to which the nitrogen atom is attached represent the same number of carbon atoms as A, to form an intermediate,

(B) reducing the intermediate formed to give a compound of the formula I, and

(C) optionally converting the compound into a pharmaceutically acceptable salt or trifluoroacetate salt.

Claims 17-19. (canceled).

Claim 20. (previously amended) A method of treating snoring, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claim 21. (previously amended) A method of treating one or more acute or chronic renal disorders, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claim 22. (original) A method as claimed in Claim 21, wherein the disorder is acute kidney failure, chronic kidney failure, or both.

Claim 23. (previously amended) A method of treating impaired intestinal function, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claim 24. (previously amended) A method of treating impaired gallbladder function, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claim 25. (previously amended) A method of treating ischemic states of the peripheral nervous system, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claim 26. (previously amended) A method of treating ischemic states of the central nervous system, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claim 27. (previously amended) A method of treating stroke, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claim 28. (previously amended) A method of treating ischemic states of peripheral organs and limbs, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claim 29. (previously amended) A method of treating shock, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claim 30-32. (canceled).

Claim 33. (previously amended) A method of treating impaired lipid metabolism, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claim 34. (previously amended) A method of treating infestation by ectoparasites, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claim 35. (original) A composition comprising a compound of Claim 1 and a pharmaceutically acceptable carrier.

Claim 36. (original) A composition comprising a compound of Claim 4 and a pharmaceutically acceptable carrier.

Claim 37. (original) A composition comprising a compound of Claim 5 and a pharmaceutically acceptable carrier.

Claim 38. (previously amended) A method of treating hypertension, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claims 39-45. (cancelled).

Claim 46. (previously amended) A method of treating a disease caused by elevated cholesterol levels, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claim 47. (previously amended) A method of treating a disease caused by endothelial dysfunction, comprising administering an effective amount of a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof.

Claim 48. (original) A method of inhibiting sodium/proton exchanger, subtype 3 (NHE3), in a patient using a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof, comprising giving the patient, for one or more days, up to four doses per day of the compound, wherein the doses are up to 200 mg/kg of body weight.

Claim 49. (original) A method of inhibiting sodium/proton exchanger, subtype 3 (NHE3), in a patient using a compound of formula I or I a as claimed in Claim 1 or a pharmaceutically acceptable salt thereof, comprising giving the patient, for one or more days, a daily dose of the compound of between 0.001 mg/kg and 100 mg/kg of body weight.

Claim 50. (original) A method as claimed in Claim 49, wherein the daily dose is between 1 and 10 mg/kg of body weight.